

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Simon TAM

Application No.: New U.S. Patent Application

Filed: July 9, 2001

Docket No.: 110031

For: CIRCUIT, DRIVER CIRCUIT, ELECTRO-OPTICAL DEVICE, ORGANIC
ELECTROLUMINESCENT DISPLAY DEVICE ELECTRONIC APPARATUS,
METHOD OF CONTROLLING THE CURRENT SUPPLY TO A CURRENT DRIVEN
ELEMENT, AND METHOD FOR DRIVING A CIRCUIT

PRELIMINARY AMENDMENT

Director of the U.S. Patent and Trademark Office
Washington, D. C. 20231

Sir:

Prior to initial examination, please amend the above-identified application as follows:

IN THE CLAIMS:

Please replace claims 4, 5, 8, 10, 12, 16, 17, 19, 20, 24 and 26 as follows:

4. (Amended) A driver circuit as claimed in claim 1 connected so as to establish when operative a voltage driver circuit comprising respective storage capacitors for the n-channel and p-channel transistors and respective switching means connected so as to establish when operative respective paths to the n-channel and p-channel transistors for respective data voltage pulses.

5. (Amended) A driver circuit as claimed in claim 1 comprising respective storage capacitors for storing a respective operating voltage of the n-channel and the p-channel transistors during a programming stage, a first switching means connected so as to establish when operative a first current path from a source of current data signals through the n-channel and p-channel transistors and the current driven element during the programming stage, and a second switching means connected to establish when operative a second current path through

the n-channel and p-channel transistors and the current driven element during a reproduction stage.

8. (Amended) A driver circuit as claimed in claim 5, further comprising respective further switching means respectively connected to bias the n-channel transistor and the p-channel transistor to act as diodes during the programming stage.

10. (Amended) A driver circuit as claimed in claim 5, wherein the circuit is implemented with polysilicon thin film transistors.

12. (Amended) A driver circuit as claimed in claim 1, wherein the current driven element is an electroluminescent element.

16. (Amended) A method as claimed in claim 13 comprising providing respective storage capacitors for the n-channel and p-channel transistors and respective switching means connected so as to establish when operative respective paths to the n-channel and p-channel transistors for respective data voltage pulses thereby to establish, when operative, a voltage driver circuit for the current driven element.

17. (Amended) A method as claimed in claim 13 comprising providing a programming stage during which the n-channel and p-channel transistors are operated in a first mode and wherein a current path from a source of current data signals is established through the n-channel and the p-channel transistors and the current driven element and wherein a respective operating voltage of the n-channel transistor and the p-channel transistor is stored in respective storage capacitors, and a reproduction stage wherein a second mode and a second current path is established through the n-channel transistor and the p-channel transistor and the current driven element.

19. (Amended) A method of controlling the supply current to an electroluminescent display comprising the method as claimed in claim 13 wherein the current driven element is an electroluminescent element.

20. (Amended) An organic electroluminescent display device comprising a driver circuit as claimed in claim 1.

24. (Amended) The circuit according to claim 22, wherein the two active elements are transistors.

26. (Amended) The circuit according to claim 22, wherein the current driven element is an organic electroluminescent element.

REMARKS

Claims 1 - 34 are pending. By this Preliminary Amendment, claims 4, 5, 8, 10, 12, 16, 17, 19, 20, 24 and 26 are amended to remove multiple dependencies. Prompt and favorable examination on the merits is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. 1.121(c)(1)(ii)).

Respectfully submitted,



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Attachement:
Appendix

Date: July 9, 2001

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DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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APPENDIX

Changes to Claims:

The following are marked-up versions of the amended claims:

4. (Amended) A driver circuit as claimed in ~~any one of claims 1 to 3~~ claim 1 connected so as to establish when operative a voltage driver circuit comprising respective storage capacitors for the n-channel and p-channel transistors and respective switching means connected so as to establish when operative respective paths to the n-channel and p-channel transistors for respective data voltage pulses.

5. (Amended) A driver circuit as claimed in ~~any one of claims 1 to 3~~ claim 1 comprising respective storage capacitors for storing a respective operating voltage of the n-channel and the p-channel transistors during a programming stage, a first switching means connected so as to establish when operative a first current path from a source of current data signals through the n-channel and p-channel transistors and the current driven element during the programming stage, and a second switching means connected to establish when operative a second current path through the n-channel and p-channel transistors and the current driven element during a reproduction stage.

8. (Amended) A driver circuit as claimed in ~~any one of claims 5 to 7~~ claim 5, further comprising respective further switching means respectively connected to bias the n-channel transistor and the p-channel transistor to act as diodes during the programming stage.

10. (Amended) A driver circuit as claimed in ~~any one of claims 5 to 9~~ claim 5, wherein the circuit is implemented with polysilicon thin film transistors.

12. (Amended) A driver circuit as claimed in ~~any preceding claim~~ claim 1, wherein the current driven element is an electroluminescent element.

16. (Amended) A method as claimed in ~~any one of claims 13 to 15~~ claim 13 comprising providing respective storage capacitors for the n-channel and p-channel transistors

and respective switching means connected so as to establish when operative respective paths to the n-channel and p-channel transistors for respective data voltage pulses thereby to establish, when operative, a voltage driver circuit for the current driven element.

17. (Amended) A method as claimed in ~~any one of claims 13 to 15~~ claim 13 comprising providing a programming stage during which the n-channel and p-channel transistors are operated in a first mode and wherein a current path from a source of current data signals is established through the n-channel and the p-channel transistors and the current driven element and wherein a respective operating voltage of the n-channel transistor and the p-channel transistor is stored in respective storage capacitors, and a reproduction stage wherein a second mode and a second current path is established through the n-channel transistor and the p-channel transistor and the current driven element.

19. (Amended) A method of controlling the supply current to an electroluminescent display comprising the method as claimed in ~~any one of claims 13 to 18~~ claim 13 wherein the current driven element is an electroluminescent element.

20. (Amended) An organic electroluminescent display device comprising a driver circuit as claimed in ~~any one of claims 1 to 12~~ claim 1.

24. (Amended) The circuit according to claim 22 ~~or claim 23~~, wherein the two active elements are transistors.

26. (Amended) ~~The~~ The circuit according to claim 22 ~~or claim 23~~, wherein the current driven element is an organic electroluminescent element.